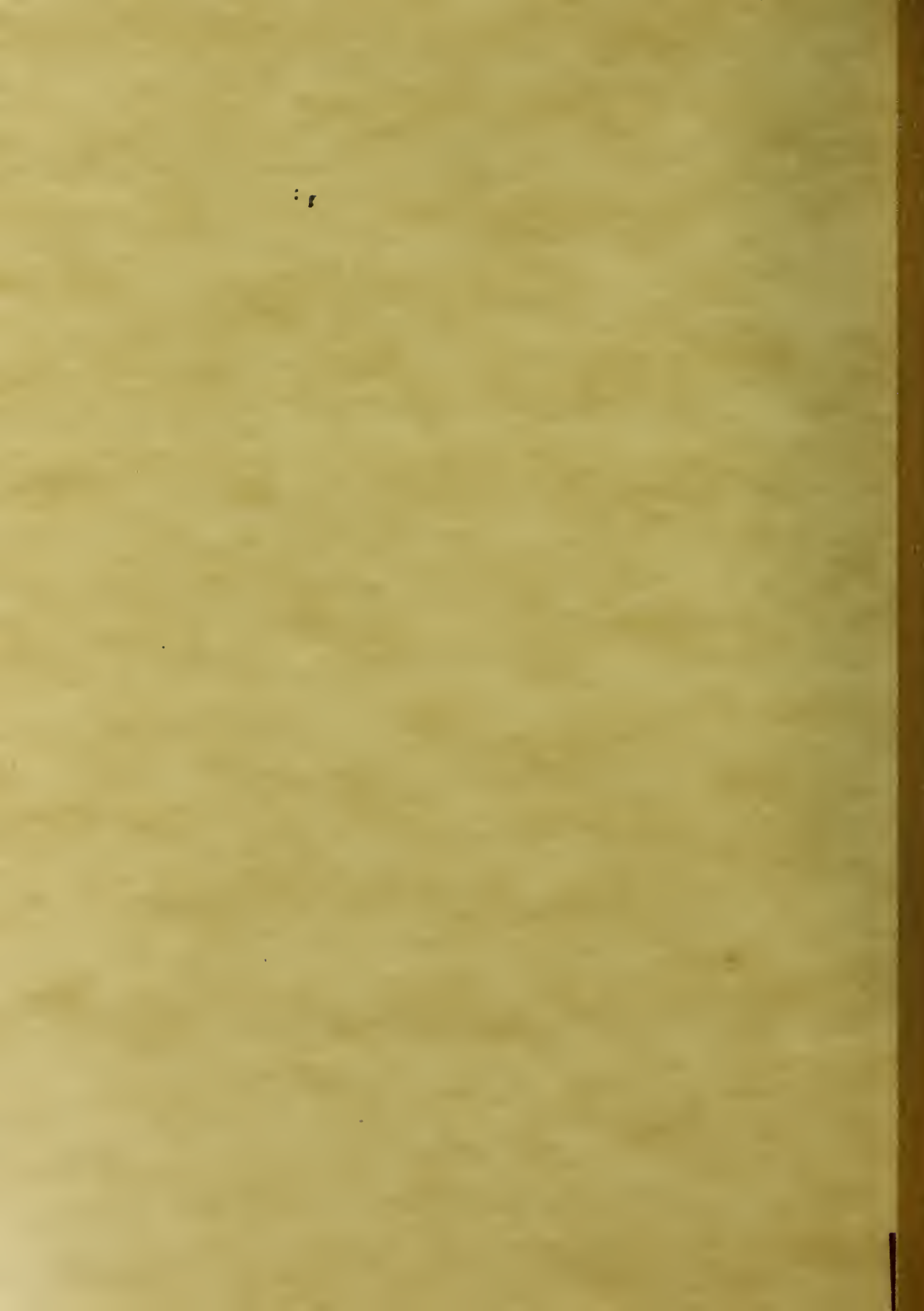


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**STUDIES
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Education in the German Federal Republic

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EDUCATION IN THE GERMAN FEDERAL REPUBLIC

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INTRODUCTION

The fundamental division of Germany between the East Zone of occupation under Soviet Russia and the three Western Zones of occupation under Great Britain, France and the United States imposes at the outset certain conditioning factors and limitations on any study of the educational system of that country. The Soviet Union has reorganized the school system in the East Zone so that it is at present completely communist dominated and has little in common with the school system of the three Western Zones and those in the three Allied sectors of Berlin. Hence the school system in East Germany will not be included in this survey. The problem of school reform has been approached somewhat differently in each of the three Zones of West Germany but the basic organization, purpose and goals of education are somewhat the same.

This study aims to present a bird's eye view of elementary, secondary and higher education in West Germany today. The hope is that it will aid in a better understanding of the German school system and provide some assistance in the interpretation of German education.

The German Federal Republic (Deutsche Bundesrepublik) is divided into ten independent states or Laender each having its own government, parliament, and laws. The ten states are united together in the German Federal Republic, the government of which is located in Bonn. In the order of their geographic size they are:

1. Bavaria (Bayern)
2. Lower Saxony (Niedersachsen)
3. Baden Wuerttemberg
4. North Rhine-Westphalia (Nordrhein-Westfalen)
5. Hesse (Hessen)
6. Rhineland-Palatinate (Rheinland-Pfalz)
7. Schleswig-Holstein
8. Hamburg
9. Bremen
10. Berlin-West Sector: American, British, French

The entire German educational system faced a desperate situation in 1945 at the end of World War II. Thousands of university professors, elementary and secondary teachers, and students had been inducted into the armed services, leaving the instructional staffs and student bodies mere shadows of their former selves. In the last years of the war academic standards and attendance records suffered severely. Destruction of school buildings, libraries, research institutes, and educational facilities in general was widespread. The task of rehabilitating the schools and universities of so large a country, torn as it was from border to border by the chaos and confusion of war, was monumental indeed.

The years since 1945, however, have witnessed constructive reforms and steady progress in virtually all levels of German education. As reorganization and reconstruction continue some of the material presented in this preliminary study will undoubtedly be subject to further change.

Education today in the German Federal Republic is the responsibility of the individual states and not of the federal government. The educational system in each of the ten states of West Germany is highly centralized under the state ministry of education. The legislation and administration of all schools and universities, therefore, is in the hands of the various states. Under such a system certain phases of education may vary considerably from one part of the country to the other. In the main essentials, however, the separate states follow along rather well-defined and established patterns.

There is wide variety in the curricula of German schools, depending on the type of school a student attends and the goal he has set for his life's work. Thus the course of study in a vocational school, which prepares a student for a trade, differs widely from that offered in the gymnasium, which prepares a student to enter a university. The aim of curriculum reform is to give the German student a broader approach to life and to help him become a thinking member of the society in which he lives. Then, too, National Socialist concepts, teachings and methods have been rejected and in their place, efforts are being made to establish a school system which emphasizes an understanding of freedom and the democratic way of life.

In attempts to revise their educational system, the Germans are plagued with a serious question: What should be the main emphasis? Should they devote most of their attention to developing an intellectual elite, or should they give as many young people as possible a chance for higher education? The problem is under careful study but as of this writing opinion is divided.

At present the German school year begins at Easter in all states except Bavaria, where it begins in the autumn. Compulsory full-time attendance for normal children starts at the age of 6. In most states of West Germany it lasts 8 years, but in Berlin, Bremen, Hamburg, and Schleswig-Holstein, the period is 9 years. Other states are also considering the extension of elementary education to 9 years. The school day generally begins at 8 a.m. and continues until 1 p.m. or shortly thereafter. Due to destruction by the war there is a serious shortage of school buildings. Many children, therefore, are forced to attend school on a double shift system.

ELEMENTARY SCHOOLS

Kindergartens (Kindergaerten)

Nursery schools and kindergartens are conducted in cities and larger villages for children from 3 to 6 years of age. They do not usually belong to the regular school system. Kindergartens are supported by communities, church and labor organizations, industry, and in some instances by private individuals. Attendance is voluntary. Some kindergartens are attached to a primary school. In such cases they are called school kindergartens (Schulkindergaerten).^{1/}

Volksschule

The Volksschule is the basic elementary school in West Germany. It is an 8-year school and accepts all normal children for at least 4 years, in the age group from 6 to 10 years. The first 4 years are called the Grundschule (foundation school). The curriculum of the Grundschule provides the pupil with the fundamentals of the three Rs, local history and geography (Heimatkunde), religion, music, art, and gymnastics. It is quite uniform throughout the various states of the German Federal Republic.

After 4 years of elementary schooling a number of possibilities are open to the pupil. He may continue in the Volksschule and complete its upper division (Volksschuloberstufe), enter the middle school (Die Mittelschule) for from 3 to 6 years intermediate schooling, or transfer to a secondary school for academic training. Approximately 81 per cent remain in the upper division of the Volksschule. When these pupils complete the 8-year Volksschule many enter a vocational school to learn a trade (p. 21). During the last 4 years of the Volksschule, the pupil continues with the subjects of the Grundschule with general history, geography, and natural science added to the curriculum. Table I presents the program of study for both boys and girls in the Volksschule.

In the cities of Berlin, Bremen, and Hamburg, where the Grundschule continues through the first 6 classes, the upper division of the elementary school is called the practical upper division (Praktische Oberstufe).

Some of the Volksschulen offer work in special classes called "Aufbauklassen" for their more capable pupils. They are parallel classes begun in the fifth or seventh year of schooling and continue until the

^{1/} Franz Hilker. "Deutsche Bundesrepublik" in Die Schulen in Westeuropa, edited by Erich Hylla and W. L. Wrinkle. Im Auftrage der Hochschule für Internationale Pädagogische Forschung. Christian-Verlag, Bad Nauheim, 1953, p. 313.

end of elementary instruction. They generally include a foreign language and have more advanced teaching goals than the regular classes of the Volksschule.

Special Schools: (Sonderschulen) are established throughout West Germany to provide elementary training for children who are physically, mentally, or emotionally handicapped. Hilfsschulen (helping schools) and Hilfsklassen exist for those who are mentally backward but who are capable of profiting from elementary training. There are also special schools for the blind, the deaf, the crippled, the mentally retarded, epileptics, and disturbed or delinquent children. Teachers in all of these schools are generally elementary school teachers who have had special training in the teaching of the handicapped.

Table 1. - Curriculum of the Volksschule^{1/}A. For Boys

Subject	Number of hours per week in each school year								
	1.	2.	3.	4.	5.	6.	7.	8.	9.
Religion	0-3	2-3	2-4	2-4	2-4	2-4	2-4	2-3	2
German	9	9	10	10	6-8	6-8	5-8	5-7	7
Social science & history	-	-	-	-	2	2	2-3	2-3	
Citizenship & geography	5	4	3	3	2	2	2	2	11
Natural science	-	-	-	-	2	2	2	2	
Arithmetic & mathematics	3	4	5	5	4-5	4-5	5-6	5-6	3
Physical education	0-1	2	2	2	2	2	2	2	
Music	1	1	1	2	2	2	2	2	3
Drawing	-	-	1	2	2	2	2	2	
Manual training	-	-	-	-	2	2	2	2	3
Foreign language	-	-	-	-	(2-6)	(2-6)	(2-4)	(2-4)	
Occupations	-	-	-	-	-	-	-	-	4
Total	18-22	22-23	24-26	26-28	28-33	30-33	30-33	30-33	30-33

B. For Girls

Subject	Number of hours per week in each school year								
	1.	2.	3.	4.	5.	6.	7.	8.	9.
Religion	0-3	2-3	2-4	2-4	3-4	3-4	2-4	2-4	2
German	9	9	9	9	6-8	6-8	5-8	5-7	7
Social science & history	-	-	-	-	2	2	2-3	2-3	
Citizenship & geography	5	4	4	4	2	2	2	2	8
Natural science	-	-	-	-	2	2	2	2	
Arithmetic & mathematics	3	4	5	5	4-5	4-5	4	3	3
Physical education	0-1	2	2	2	2	2	2	2	
Music	1	1	1	2	2	2	2	2	2
Drawing	-	-	1	2	2	2	2	2	
Needle work	-	-	(2)	(2)	2	2	2-3	2-3	(3)
Foreign language	-	-	-	-	(2-6)	(2-6)	(2-4)	(2-4)	
Home economics	-	-	-	-	-	-	-	4	4
Occupations	-	-	-	-	-	-	-	-	4
Total	18-22	22-23	24-28	26-30	28-33	30-33	30-33	30-33	30-33

^{1/} Franz Hilker. "Deutsche Bundesrepublik" in Die Schulen in Westeuropa, edited by Erich Hylla and W. L. Wrinkle. Im Auftrage der Hochschule für Internationale Pädagogische Forschung. Christian-Verlag, Bad Nauheim, 1953. P. 334.

MIDDLE SCHOOLS (MITTELSCHULEN)

Four per cent of the students finishing the Grundschule enter a middle school. This is a full-time intermediate or lower secondary school paralleling the upper elementary system. Though a good deal of attention has been given to the development and improvement of intermediate education, many of these schools are still in the formative stage of development. The major objective of intermediate education is to steer a middle ground between general practical training for students who specialize in a given trade or craft, and the more strictly academic instruction for students who may transfer to a secondary school, in preparation for university study. The main purpose of the middle school is to widen the scope of the pupils' general education, and to prepare those with a practical turn of mind for positions in trade, industry, commerce, or in the administrative service of the state or community. As an adjunct of the Volksschule, the middle school continues until the end of the 16th year of a pupil's life, or 10th year of schooling.

The diploma awarded upon graduation from the middle school is called the certificate of middle maturity (Zeugnis der Mittleren Reife). The holder of this certificate may enter the 11th class (Obersekunda - actually class 7) of a regular secondary school. If such a student has a language deficiency, however, it must be made up. Middle school teachers (Mittelschullehrer) are generally selected from among the better qualified elementary school teachers who have had at least 2 years of private studies leading to the qualifying examination for middle school teachers.

West Germany has a variety of middle schools. Basically, however, there are three main types: (1) those that offer a 6-year course of instruction based on the 4-year Grundschule, (2) those offering a 4-year curriculum based on 6 years of elementary schooling, and (3) those offering a 3-year period of study based on 7 years of elementary instruction.

The 6-Year Middle School--At present there are 6-year middle schools in Hesse, Niedersachsen, Nordrhein-Westfalen, Rheinland-Pfalz, and Baden-Wuerttemberg. Although they have existed for many years, their organization, purpose, and program of study are still under discussion. A representative curriculum of the 6-year middle school for boys and girls follows as Table 2.

Table 2. - Curriculum of the 6-Year Middle School^{1/}A. For Boys

Subject	Number of hours per week in each school year					
	5.	6.	7.	8.	9.	10.
Religion	2	2	2	2	2	2
German		5	5	5	5	5
History & social science	6	2	2	2	2	3
Geography	2	2	2	2	2	2
First modern language	6	4-5	4-5	3-5	3-5	3-5
Second modern language	-	-	(3-5)	(3-5)	(3-5)	(3-5)
Arithmetic & mathematics	4	4-5	4-5	5-6	5-6	5-6
Natural science	2	2-3	2-3	3-4	3-4	3-4
Drawing	2	2	2	2	2	2
Manual training	(2)	(2)	(2)	(2)	(2)	(2)
Gardening	-	-	(1-2)	(1-2)	(1-2)	(1-2)
Music	2	2	2	1	1	1
Physical education	3	3	3	3	3	3
Shorthand	-	-	-	(1)	(1)	-
Total	29	30	30	32	32	32

B. For Girls

	Number of hours per week in each school year					
	5.	6.	7.	8.	9.	10.
Religion	2	2	2	2	2	2
German		5	5	5	5	5
History & social science	6	2	2	2	2	2
Geography	2	2	2	2	2	2
First modern language	6	4-5	4-5	3-5	3-5	3-5
Second modern language	-	-	(3-5)	(3-5)	(3-5)	(3-5)
Arithmetic & mathematics	3	3-4	3-4	4-5	4-5	4-5
Natural Science	2	2	2-3	2-3	2-3	2-3
Drawing	2	2	2	2	2	2
Manual training	-	-	-	(1)	(1)	(1)
Gardening	-	-	-	(1-2)	(1-2)	(1-2)
Needlework	2	2	2	2	2	2
Housekeeping	-	-	-	-	(3-4)	(3-4)
Music	2	2	2	2	2	2
Physical education	3	3	3	3	3	3
Shorthand	-	-	-	(1)	(1)	-
Total	30	30	31	31	31	31

^{1/} Franz Hilker. "Deutsche Bundesrepublik" in Die Schulen in Westeuropa, Edited by Erich Hylla and W. L. Wrinkle. Im Auftrage der Hochschule für Internationale Pädagogische Forschung. Christian-Verlag, Bad Nauheim, 1953, p. 335.

The 4-Year Middle School--Middle schools with the 4-year course of study begin in the 7th year and finish at the end of the 10th school year. In Hesse and Nordrhein-Westfalen, such schools are called Realschulen. In Berlin, Hamburg, and Bremen, they are known as the Technische Oberstufe. These 4-year Middle Schools seek to give the student a general education and help prepare him for responsible positions in economic, governmental, and social fields. The curriculum given in Table 3 is taken from the study plan of the state of Hesse.

Table 3. - Curriculum for the 4-Year Realschule^{1/}

	Number of hours a week per school year							
	Boys				Girls			
	7.	8.	9.	10.	7.	8.	9.	10.
Religion	2	2	2	2	2	2	2	2
Social science	3-4	3-4	4	4	3-4	3-4	4	4
German	4-5	4-5	4	4	4-5	4-5	4	4
History	4-5	4-5	4	4	2			
Geography	2	2	2	2	2	3	3	3
First modern language	3-4	3	3	3	3-4	3	3	3
Second modern language (elective)	(3-5)	(3-5)	(4)	(3)	(3-5)	(4)	(4)	(3)
Mathematics	3-4	3	3-4	3-4	3	3	3	3
Natural science	2-3	3	3-4	3-4	2	3	3	3
Art (manual training & needlework)	3	3	3	3	4	4	4	4
Music & Physical edu- cation	4	4	3	3	4	4	4	3
Gardening	-	-	(1)	(1)	-	-	(1)	(1)
Shorthand & typing	-	-	(1)	(2)	-	-	(1)	(2)
Homemaking	-	-	-	-	-	-	-	(4)
Total	30-34	30-34	30-34	30-34	30-34	30-34	30-34	30-34

^{1/} Franz Hilker. "Deutsche Bundesrepublik" in Die Schulen in Westeuropa, edited by Erich Hylla and W. L. Wrinkle. Im Auftrage der Hochschule für Internationale Pädagogische Forschung. Christian-Verlag, Bad Nauheim, 1953, p. 336.

The 3-Year Middle School--The 3-year middle school is prominent in Bavaria and has been in existence in that state for a long time. It begins with the 8th school year and continues through the 10th. The curriculum is divided into three groups: "compulsory subjects" (Kernfächer); "compulsory electives" (Wahlpflichtfächer); and "electives" (Wahlfächer). The purpose of the compulsory subjects is to round out the student's general education begun in the Volksschule. The "compulsory electives" are more specialized and are divided into four groups, one of which the student must choose: I - General (allgemein), II - Economic or Commercial (wirtschaftskundlich), III - Agricultural (landwirtschaftlich), IV - Industrial (gewerblich). The electives, a more restricted group of subjects, may be selected by the student as he pleases. The program of studies for boys and girls is somewhat different. The curriculum shown in Table 4 is from the Bavarian 3-year middle school for boys.

Table 4. - Curriculum of the 3-Year Middle School^{1/}For Boys

A. COMPULSORY SUBJECTS	Number of hours a week per school year											
	8th school year				9th school year				10th school year			
Religion	2				2				2			
German	5				4				4			
History & social science	2				2				2			
Geography	2				2				2			
English	5				4				4			
Mathematics	3				3				3			
Physics	2				2				2			
Chemistry	-				2				2			
Hygiene	-				-				-			
Music	1				1				1			
Physical education	2				2				2			
Total	24				24				24			
B. COMPULSORY ELECTIVES	I ^{2/}	II	III	IV	I	II	III	IV	I	II	III	IV
Arithmetic (bookkeeping)	3	4	3	3	3	4	3	3	3	4	3	3
Biology	-	-	2	-	2	-	-	-	2	-	-	-
Shorthand	2	2	-	-	1	1	1	-	1	1	-	-
Drawing	2	-	-	2	2	-	-	2	2	-	-	2
Economics	-	2	2	1	-	2	1	1	-	2	1	1
Commercial correspondence (typing)	-	-	-	-	-	2	-	-	-	2	-	-
Chemistry & geology	-	-	-	-	-	-	2	-	-	-	1	-
Commercial science	-	-	-	-	-	-	2	-	-	-	-	-
Vocational instruction	-	-	-	2	-	-	-	4	-	-	4	4
Total	7	8	7	8	8	9	9	10	8	9	9	10
C. ELECTIVES												
French	-				2				2			
Drawing	2				2				2			
Appliance construction	3				3				3			
Instrumental instruction	2				2				2			
Shorthand	2				2				2			
Typing	2				2				2			
Script writing	1				1				1			

1/ Franz Hilker. "Deutsche Bundesrepublik" in Die Schulen in Westeuropa, edited by Erich Hylla and W. L. Wrinkle. Im Auftrage der Hochschule für Internationale Pädagogische Forschung. Christian-Verlag, Bad Nauheim, 1953. P. 337.

2/ I, General; II, Commercial; III, Agricultural; IV, Industrial.

SECONDARY SCHOOLS (HOEHERE SCHULEN)

About 15 per cent of the students who complete the first 4 years of the Volksschule enter a secondary school. They are generally students with the highest academic achievement. About one-fourth of the students who enter secondary school complete its full course of studies. Those who do are qualified to enter a university or other institution of higher learning. Many, however, finish only the tenth grade, while others enter a vocational school. A serious attempt has been made in some quarters to make the secondary school available to more students. The city of Bremen, for example, which has long been a leader in school reform, has introduced a program that will enable all children to acquire a good secondary education.^{1/}

Secondary schools are a vital part of the German school system, emphasizing intellectual development. Their goals have frequently been stated as follows: to widen the student's intellectual horizon, to introduce him to scientific and scholarly methods of thought, to encourage his desire to learn, and to develop the powers of sound judgment and critical evaluation. Secondary education prepares German youth for the more responsible positions in contemporary German society. Leading to the certificate of maturity, it gives the student the requisite background for university study and the pursuit of such professions as medicine, dentistry, law, pharmacy, secondary school teaching, university teaching, and related fields.

Though changes have been made in the field of German secondary education, reforms have not been as extensive as in the elementary field. For example, some observers feel that the curriculum does not pay enough attention to the current situation. New emphasis, however, has been placed on the social sciences and, in particular, on the teaching of history. The main stress is on classical and modern languages, mathematics, science, music and art, with German culture an essential part of the curriculum.^{2/}

There are today a great variety of secondary schools in West Germany, with courses of instruction ranging in duration from 5 to 9 years. Essentially, however, they can be classified into three general types depending on the major emphasis in the curriculum. The first type is called the classical gymnasium, humanistic gymnasium or simply gymnasium, and emphasizes Latin and Greek; the second type, frequently called the modern language gymnasium but more generally known as the Realgymnasium, emphasizes modern languages; the third type, sometimes called the gymnasium for Mathematics and Science but more commonly known as the Oberrealschule, emphasizes Mathematics and Science.

1/ Fred H. Tone and Warninghoff. "The Bremen School Reform" in The Educational Forum, Vol. XIV, No. 3, Part I, March 1950, pp. 331-337.

2/ Henry P. Pilgert. The West German Educational System. Historical Division Office of the Executive Secretary, Office of the U. S. High Commissioner for Germany, 1953, p. 47.

The term "Oberschule" was introduced quite extensively in recent years. It was intended to apply to all secondary schools but generally has been used to designate only the second and third types described above.

The traditional German secondary school presented a 9-year curriculum based on 4 years of work in the Grundschule. In 1937 the Nazis reduced this program to 8 years. After the War, however, most states restored the 9-year curriculum.

At the end of the secondary school the student must take a thorough oral and written final examination, called the Reifeprüfung (Maturity Examination), or Abitur. The diploma issued upon graduation from a secondary school is the certificate of maturity (Zeugnis der Reife or Reifezeugnis). This credential is of great value to the student. It not only signifies the successful completion of his secondary education but it qualifies him to enter a university or other institution of higher learning.

The Classical Gymnasium

(Altsprachliches or Humanistisches Gymnasium)

The classical gymnasium has long been an essential part of German education. In the normal course of events one enters a gymnasium after completing the 4-year Grundschule. It is also possible, as noted previously, to transfer to a gymnasium from the middle school at the end of the 10th year when the student has been awarded the certificate of middle maturity (p. 8).

The classical gymnasium provides the student with systematic and thorough instruction in such subjects as religion, German, history and the newly introduced social studies, geography, mathematics, physics, chemistry, biology and music. As the name implies, emphasis is on the classical languages. Latin is the first foreign language, with either English or French the second, Greek the third, and the fourth an elective chosen from among several other languages. There are some exceptions to this general pattern. Sometimes Greek can be the second language instead of English or French. Also, girls may follow either the above plan or an arrangement in this order: (1) modern language, (2) Latin, (3) Greek and (4) another elective with a corresponding change in the number of hours devoted to it. Table 5 gives the program with the number of hours of instruction per week of a typical 9-year classical gymnasium.

Table 5. - Program of Study for the Classical Gymnasium^{1/}

Subject	Number of hours per week in each school year									
	5.	6.	7.	8.	9.	10.	11.	12.	13.	
Religion	2	2	2	2	2	2	2	2	2	
German	5-6	4	4	4	4	4	4	4	4	
History and social science	-	0-2	2	2	2	2	2	2	2	
Geography	2	2	2	2	1	2	2	1	1	
First foreign language (Latin)	6-7	6-7	6	5	5	4-5	5	5	5	
Second foreign language (modern)	-	-	4-5	3	3	3	2-3	2-3	2-3	
Third foreign language (Greek)	-	-	0-5	5-6	5-6	5-6	5-6	5-6	5-6	
Fourth foreign language (optional)	-	-	-	-	-	-	(2)	(2)	(2)	
Mathematics	4	4	4	3	3	3	3	3	3	
Physics	-	-	-	2	2-3	1-2	1-2	1-2	1-2	
Chemistry	-	-	-	-	-	2	1-2	1-2	1-2	
Biology	2	2	2	0-1	1	1-2	1-2	1	1	
Music	2	2	2	1	1	1-2	1-2	1-2	1-2	
Art	2	2	2	2	2	1-2	1-2	1-2	1-2	
Physical education	2	2	2	2	2	2	2	2	2	
Total	28	28	32	34	34	34	34	33	34	

^{1/} Franz Hilker. "Deutsche Bundesrepublik" in Die Schulen in Westeuropa, edited by Erich Hylla and W. L. Winkle. Im Auftrage der Hochschule für Internationale Pädagogische Forschung. Christian-Verlag, Bad Nauheim, 1953. P. 338-339.

The Realgymnasium

(Modern Language Gymnasium - Neusprachliches Gymnasium)

The realgymnasium, or modern language gymnasium, emphasizes modern languages, principally French and English. It also retains Latin. The order in which these languages are studied varies, but in most instances Latin is offered as a second foreign language. There are schools of this type, however, with Latin as the first foreign language. In other instances Latin could be the third foreign language. The other subjects of the curriculum follow the pattern of those offered in the classical gymnasium with particular emphasis upon mathematics and science, and some emphasis in the social studies.

Table 6. - Program of Study for the Modern Language Gymnasium^{1/}

Subject	Number of hours per week for each school year								
	5.	6.	7.	8.	9.	10.	11.	12.	13.
Religion	2	2	2	2	2	2	2	2	2
German	5-6	5-6	4	3-4	3-4	3-4	3-4	3-4	3-4
History and social science	0-1	1-2	2	2-3	2-3	2-3	2	2	2-3
Geography	2	2	2	2	2	1-2	1-2	1-2	1-2
First foreign language(modern)	5-6	5-6	4-5	4	4	3-4	3-4	3-4	3-4
Second foreign language(Latin)	-	-	5-6	4-6	4-5	3-5	3-4	3-4	3
Third foreign language(modern)	-	-	-	0-4	0-4	4	4	4	3-4
Mathematics	4-5	4-5	4	3-4	3-4	3-4	3-4	3-4	3-4
Physics	-	-	-	1-2	1-2	1-2	2	1-2	2
Chemistry	-	-	-	-	1-2	1-2	3-2	1-2	1-2
Biology	2	2	2	1-2	3	1	1-2	1-2	1
Music	2	2	1-2	1-2	1	1	1-2	1-2	1-2
Art	2	2	2	2	1-2	1-2	1	1	1
Physical Education	2	2	2	2	2	2	2	2	2
Total	28-30	29-30	31-33	30-34	30-34	32	34	31-34	30-34

^{1/} Franz Hilker. "Deutsche Bundesrepublik" in Die Schulen in Westeuropa, edited by Erich Hylla and W. L. Wrinkle. Im Auftrage der Hochschule für Internationale Pädagogische Forschung. Christian-Verlag, Bad Nauheim, 1953, p. 339.

The Oberrealschule
Gymnasium for Mathematics and Science
 (Mathematisch-naturwissenschaftliches Gymnasium)

The Oberrealschule or gymnasium for mathematics and science is the third main type of secondary school. It requires two modern languages. Latin can be selected as an elective during the last 3 years of secondary education, or in some states (Rheinland-Pfalz), can be chosen in the place of a second modern language. In this type of gymnasium, the general curriculum is somewhat the same as that found in the classical and modern language gymnasium. A comparison of Table 7, which follows, with Tables 5 and 6 will show, however, that there is less emphasis on languages and far more attention given to mathematics and science than in the other two secondary schools.

Table 7. - Program of Study for the Gymnasium for Mathematics and Science^{1/}

Subject	Number of hours per week for each school year									
	5.	6.	7.	8.	9.	10.	11.	12.	13.	
Religion	2	2	2	2	2	2	2	2	2	
German	5-6	5-6	4	3-4	3-4	3-4	3-4	3-4	4	
History and social science	0-1	1-2	2	2	2	2-3	2-3	2-3	2-3	
Geography	2	2	2	2	1-2	1-2	1-2	1-2	1-2	
First foreign language(English)	5-6	5-6	4-5	4	3	3	3	3	2-3	
Second foreign language (Latin)	-	-	5-6	5-6	3-4	3-4	2-3	2-3	2-3	
Mathematics	4-5	4-5	4	4-5	4-5	4-5	4-5	4-5	4-5	
Physics	-	-	-	0-2	2-3	2-3	2-3	2-3	2-3	
Chemistry	-	-	-	-	2	2	2	2	2	
Biology	2	2	2	1-2	1-2	1-2	1-2	1-2	1-2	
Music	2	2	2	1-2	1	1	1	1	1	
Art	2	2	2	2	1-2	1-2	1-2	1-2	1-2	
Physical education	2	2	2	2	2	2	2	2	2	
Total	28	29	31-33	30-32	30-33	32-33	31-33	31-33	30-33	

^{1/} Franz Hilker. "Deutsche Bundesrepublik" in Die Schulen in Westeuropa, edited by Erich Hylla and W. R. Winkle. Im Auftrage der Hochschule für Internationale Pädagogische Forschung. Christian-Verlag, Bad Nauheim, 1953, p. 340.

The Aufbauschule--another form of secondary school--was established in the nineteen twenties under the German Republic to make it possible for students to transfer from the Volksschule on completion of its class 6 to a higher school. Aufbauschulen are generally located in the smaller rural communities. They are usually boarding schools and are attended mostly by children from the agricultural districts. They provide country children with the secondary education required for university study.

Immediately after the end of World War II the Aufbauschule, which had a 6-year curriculum under the National Socialists, was re-established in West Germany as a shorter form (Kurzform) of secondary school. Today, however, the course of instruction is generally 7 years, providing a wide variety of subjects, with English and Latin, respectively, as the first and second language. The 7-year curriculum is followed in Bavaria and Hesse, although a 6-year curriculum prevails in Berlin and Hamburg. The curriculum in Bavaria places special emphasis on music and art. Table 8 gives the study program of the 7-year Aufbauschule in Hesse.

Table 8. - The Program of Study for the 7-Year Aufbauschule in Hesse^{1/}

Subject	Number of hours per week for each school year						
	7.	8.	9.	10.	11.	12.	13.
Religion	2	2	2	2	2	2	2
German	5-6	4-5	4-5	4-5	4-5	4-5	4-5
History and social science	2-3	2-3	2-3	2-3	2-3	2-3	2-3
Geography	2	2	2	2	2	2	2
First foreign language	6	4-5	3-4	3-4	3-4	3-4	3-4
Second foreign language	-	5	4-5	3-5	3-5	3-5	3-5
Mathematics	4-6	4	3-5	3-5	3-5	3-5	3-5
Physics	-	0-1	2	2	2	2	2
Chemistry	-	-	-	1-2	1-2	1-2	1-2
Biology	2	2	2	1-2	1-2	1-2	1-2
Music	2	2	2	1	1	1	1
Art	2	2	2	2	2	2	2
Physical Education	2	2	2	2	2	2	2
Practical work--needlework	2	2	2	2	2	2	2
Total	32	34	34	34	34	34	34

^{1/} Franz Hilker. "Deutsche Bundesrepublik" in Die Schulen in Westeuropa, edited by Erich Hylla and W. L. Wrinkle. Im Auftrage der Hochschule für Internationale Pädagogische Forschung. Christian-Verlag, Bad Nauheim, 1953, p. 341.

The Wirtschaftsoberschule was also established in the nineteen twenties, to give the student training in commerce and at the same time enable him to continue his general education. The school does not, however, prepare the student for a particular trade or profession. The course of instruction in the Wirtschaftsoberschule is 3 years, beginning with the 11th school year. Candidates for admission may transfer from the regular secondary schools (Gymnasium) or present a proper leaving certificate (Abgangszeugnis) from a regular middle school.

On successful completion of the 3-year course the student is awarded a certificate of maturity (Reifezeugnis). With this diploma he may pursue any of several goals: (1) enter a commercial college (Handelshochschule); (2) enroll in the Faculty of Economics at a regular university; or (3) go into business where after a 2 years' apprenticeship he may qualify for an administrative position. Table 9 gives the study program of the 3-year Wirtschaftsoberschule in Hesse.

Table 9. - Program of Study for the 3-Year Wirtschaftsoberschule in Hesse^{1/}

Subject	Hours a week per school year		
	11.	12.	13.
I. ECONOMICS (COMMERCE)			
Commercial science	4	3	3
Commercial law	-	1	1
Bookkeeping	3	3	3
Commercial arithmetic	2	2	2
Economic geography	2	2	2
Economics	2	2	2
Workshop	-	-	2
Political instruction	1	1	1
Economic and cultural history	2	2	2
II. LANGUAGES			
German	4	4	4
English	4	4	4
French	3	3	3
Electives: Spanish, Portuguese, Russian	(2)	(2)	(2)
III. SCIENCE AND MATHEMATICS			
Chemical and physical technology	2	2	2
Mathematics	3	3	3
IV. TECHNICAL SUBJECTS			
Shorthand	3	2	1
Typing	2	2	1
English shorthand	-	(2)	-
French shorthand	-	-	(2)
V. SPORT	2	2	2
Total	41	40	40

^{1/} Franz Hilker. "Deutsche Bundesrepublik" in Die Schulen in Westeuropa, edited by Erich Hylla and W. L. Winkle. Im Auftrage der Hochschule für Internationale Pädagogische Forschung. Christian-Verlag, Bad Nauheim, 1953, p. 341-342.

The Frauenoberschule is an upper secondary school for girls, which begins with the completion of the tenth school year. Pupils who have finished the 6-year middle school for girls, sometimes called the Lyzeum, may enter the Frauenoberschule. Its 3-year curriculum combines scientific and cultural subjects with instruction in homemaking. This school was in existence under the German Republic 1918-1933 and during the National Socialist regime, 1933-1945. It is diminishing somewhat in importance in present day Germany, since its certificate of maturity does not satisfy the educational requirements for university study. In fact, this type of school was discontinued in Hesse in 1945. The study program of the Frauenoberschule for Nordrhein-Westfalen follows:

Table 10. - Program of Studies for the Frauenoberschule^{1/}

Subject	Number of hours per week for each school year					
	Course in Music and Art			Course in Science and Home Economics		
	11.	12.	13.	11.	12.	13.
Religion	2	2	2	2	2	2
German	4	4	4	4	4	4
History and social science	2	3	3	2	3	3
Geography	2	2	2	2	2	2
Theory of education	1	1	1	1	1	2
First foreign language(English)	(3)	(3)	(4)	(3)	(3)	(3)
Second foreign language (French)	(3)	(3)	(4)	(3)	(3)	(3)
Mathematics	2	2	2	2	2	2
Physics	-	-	-	1	1	2
Chemistry and nutrition	1	1	2	2	3	2
Biology and hygiene	1	1	1	3	2	2
House and Garden	5	5	-	5	5	6
Music	3	2	3	2	2	2
Needlework	4	4	4	3	3	-
Art and creative work	4	4	4	2	2	2
Physical education	2	2	2	2	2	2
Total	36	36	34	36	37	36

^{1/} Franz Hilker. "Deutsche Bundesrepublik" in Die Schulen in Westeuropa, edited by Erich Hylla and W. L. Wrinkle. Im Auftrage der Hochschule für Internationale Pädagogische Forschung. Christian-Verlag, Bad Nauheim, 1953, p. 343.

Graph 1.--ORGANIZATION OF ELEMENTARY AND SECONDARY SCHOOLS IN WEST GERMANY

Age	Schl. Year	Certificate of Maturity (Reifezeugnis)	Age	Schl. Year
18	13	<p style="text-align: center;"> G Y M N A S I U M S E C O N D A R Y S C H O O L S O B E R R E A L S C H U L E A U S F B H A U L E M I D D L E S C H O O L S C e r t i f i c a t e o f M i d d l e M a t u r i t y E l e m e n t a r y S c h o o l D i p l o m a 7 - Y e a r & 6 - Y e a r 4 - Y e a r 3 - Y e a r 6 - Y e a r </p>	13	18
17	12		12	17
16	11		11	16
15	10		10	15
14	9		9	14
13	8		8	13
12	7		7	12
11	6		6	11
10	5		5	10
9	4		4	9
8	3		3	8
7	2		2	7
6	1		1	6

E L E M E N T A R Y S C H O O L
(Volksschule)

VOCATIONAL SCHOOLS

The vocational schools of West Germany representing the practical and technical branches of German secondary education, are designed for all students who wish to learn a trade or profession, who must enroll for part-time instruction as supplementary schooling during an apprenticeship, who want to attend a full-time vocational school, or who wish to develop their skill and knowledge further by enrolling in an advanced vocational school. Nearly 80 per cent of all students, both boys and girls, who finish the 8-year Volksschule attend a vocational school in one form or another. In the year 1949, almost 1,400,000 students attended vocational schools.^{1/}

In the past one of the foundation stones of German industry has been her number of highly skilled laborers and trained technicians. Today West Germany needs them as much as ever, for her economy is largely dependent on the quality of the industrial products manufactured in her shops and factories. The fact too that the war reduced the number of skilled workers in the 25- to 45-year age group puts an even higher premium on graduates of vocational schools. These schools therefore play an important role in modern German society.

Germany has a well organized and highly specialized vocational school system with a large number and variety of vocational schools. Basically, however, these schools fall into three major classifications: (1) the trade school (Berufsschule), (2) the technical trade school (Berufsfachschule), and (3) the technical school (Fachschule).

The Trade School (Berufsschule)--This is a part-time vocational school attended by apprentices required to continue instruction during apprenticeship. It is sometimes called a continuation school (Fortbildungsschule) because it carries on the general schooling begun in the Volksschule. The term Fortbildungsschule was used widely during the period of the Weimar Republic, particularly in south Germany where the term took deep root. At present, the tendency is to use the word Berufsschule almost exclusively.

Attendance at a trade school is usually for 3 years with a minimum of 2 years. Because attendance is compulsory up to the age of 18, it is also referred to as a compulsory trade school (Berufspflichtschule)--one that the apprentice and other pupils of compulsory school age must attend on leaving the Volksschule unless they are registered at some other type of school such as a middle school, a regular secondary school, or a different form of vocational school. The program of study is from 6 to 10 hours weekly and varies according to the different states.

^{1/} Robert Wefelmeyer. "Deutsche Bundesrepublik" in Probleme des Beruflichen Bildungswesens, herausgegeben von Harold Robinson et al. Stuttgart, Verlag A. Müller, 1951, p. 74.

The curriculum of the trade school is specialized--agricultural, industrial, and the like. Even within the same craft it can vary from one locality to the next. Since German school reformers believe that the training of an expert workman cannot be the sole function of vocational schools, the school aims to develop a sense of civic and social responsibility in each student and to help him become an independent thinker. Even so, the main emphasis is on vocational training.

There are more Berufsschulen than any other type of secondary schools in West Germany. Only the most representative can be treated here. Agricultural trade schools, sometimes known as rural continuation schools (laendliche Fortbildungsschulen) prepare students for a future career in agriculture. They are in many cases closely connected with the Volksschule, often using its accommodations. Attended primarily by sons and daughters of farmers and agricultural workers, their object is to connect the teaching in the Volksschule with a fundamental practical knowledge of agriculture and rural life, work on the land being the core of the curriculum. About two-thirds of the classes are held during the winter months. Agricultural trade schools are divided into numerous branches and specialties such as general farming, wine culture, fruit growing, horticulture, poultry farming, bee-keeping, and dairying. They generally offer a 2-year course.

The industrial (gewerbliche) trade schools are organized along the lines of the various trades in West Germany. Among the more prominent types are those in the fields of building and construction, textiles, mining, metal and wood work, locksmithing, tailoring, automotive work and machinery, art products, and the production of foodstuffs. Larger schools of this type also have classes for unskilled laborers. The curriculum includes, among other subjects, occupations, citizenship, arithmetic, bookkeeping, elements of the trade under study, and technical drawing. Large industries often support these schools for their apprenticed employees. The schools then are sometimes called Werksberufsschulen.

The commercial (kaufmaennische) trade schools help to prepare young people for careers in the business world. Their internal organization generally varies according to the locality, but the program of instruction usually includes such subjects as commercial science, German, business correspondence, arithmetic, bookkeeping, economic geography, citizenship, penmanship, and shorthand.

Berufsschulen in which girls can follow courses in household work and dressmaking are established in virtually all of the larger towns. Their course of instruction is built mainly around such subjects as social conduct, cooking, nutrition, sewing, laundry, housekeeping, household bookkeeping, child care, nursing, singing and physical education.

The Technical Trade School (Berufsfachschule)--This school also called the Berufsvorschule represents the technical branch of German vocational secondary education. Technical trade schools differ from the trade school in a number of important respects: (1) attendance is not compulsory; (2) they are full-time vocational schools with courses of study varying from 1 to 3 years; (3) class meetings are held daily with an average of from 30 to 36 hours a week;

(4) students generally devote all of their time to classes and a full curriculum, with only a few schools permitting students simultaneously to engage in outside practical work; (5) in the vocational training of young apprentices these schools do not follow the same pattern as the trade schools; (6) they are on a higher plane than the trade schools; and (7) do not enroll as many students.

Admission to the technical trade school varies according to the type of school and the part of West Germany in which it is located. Some schools admit students upon the completion of the 8-year Volksschule while others require 10 years of previous education in addition to some practical work.

The *Wirtschaftsoberschule* described among secondary schools on page 17 is a special type of technical trade school. Another special type, which has been established in Wuerttemberg for students in the industrial field, is the "Technische Aufbauschule". This school admits students of high achievement who have finished an industrial trade school and completed their apprenticeship. These "Technische Aufbauschulen" offer a 2-year general course of study which also leads to the maturity examination and qualification to enter a technical school of higher education such as a Technische Hochschule.

Like the other branches of German secondary education, there are many kinds of technical trade schools, with variations throughout West Germany. The commercial schools are among the oldest and most widespread. They comprise commercial lower secondary schools (*Handelsschulen*) and commercial upper secondary schools (*Hoehere Handelsschulen*). The commercial lower secondary school admits students on completion of the elementary school. Though its 2-year curriculum is centered primarily on vocational subjects, the student can choose either English or French as a foreign language and is introduced to a course in Social Studies. The *Handelsschule* has a curriculum somewhat as shown in Table 12.

Table 11. - Curriculum of the 2-Year Handelsschule^{1/}

Subject	Number of hours a week per semester				
	I.	II.	III.	IV.	Total
Commercial science	4	4	4	4	16
Commercial correspondence	4	4	3	3	13
Commercial arithmetic	2	2	3	3	11
Bookkeeping	4	4	4	4	16
German	4	4	4	4	16
Foreign language (English or French)	2	2	2	2	8
Social studies	2	2	-	-	4
Economic geography	-	-	2	2	4
Merchandise	6	6	6	6	24
Penmanship, shorthand and typing	2	2	2	2	8
Total	30	30	30	30	120

^{1/} Franz Hilker. "Deutsche Bundesrepublik" in *Die Schulen in Westeuropa*, edited by Erich Hylla and W. L. Winkle. Im Auftrage der Hochschule für Internationale Pädagogische Forschung. Christian-Verlag, Bad Nauheim, 1953, p.346.

Although commercial upper secondary schools admit students of high achievement who have finished at least the 9th year in a middle or secondary school, they prefer students who have finished the 10th class and possess the certificate of middle maturity (p. 8). The 1-year program of studies of a typical Hoehere Handelsschule is shown in Table 12.

Table 12. - Curriculum of the 1-Year Hoehere Handelsschule^{1/}

Subject	Number of hours a week per semester		
	I.	II.	Total
Commercial science and commercial correspondence	5	5	10
Commercial arithmetic	4	4	8
Bookkeeping	3	4	7
German	2	2	4
Social Science	2	2	4
Economic geography	2	2	4
English	4	4	8
French	4	4	8
Economic history	1	1	2
Penmanship, shorthand and typing	6	6	12
Physical education	2	2	4
Total	35	36	71

^{1/} Franz Hilker. "Deutsche Bundesrepublik" in Die Schulen in Westeuropa, edited by Erich Hylla and W. L. Winkle. Im Auftrage der Hochschule für Internationale Pädagogische Forschung. Christian-Verlag, Bad Nauheim, 1953, p. 347.

Trade Schools for Girls (Weibliche Berufsfachschulen) are of three principal kinds. There are (1) the 1-year homemaking school (Haushaltungsschule), (2) the 1-1/2 to 2-year school for the care of children and for household assistants (Schule fuer Kinderpflege und Haushaltsgehilfinnen), and (3) the 2- to 3-year trade or women's work school (Maedchengewerbe oder Frauenarbeitsschule).

The homemaking school is the best-known and most widespread throughout West Germany. It can be found in virtually every urban area of any size. It meets about 35 hours weekly and offers courses in such subjects as house and garden work, handicraft, health education, care of children and the sick. Social problems, German, commercial correspondence, arithmetic and household bookkeeping are also included in the curriculum. The school for the care of children and household assistants is most often connected with the regular homemaking schools. The latter, however, have a broader and more intensive course of study.

In Wuerttemberg the women's work school (Frauenarbeitsschule) occupies a special place in vocational training for girls. In some cases completion of the course of study leads to the journeyman's examination (Gesellenprüfung)

Technical Trade Schools and Schools of Applied Art (Technische und Kunstgewerbeschulen) often represent a mixture of full-time vocational and advanced technical schools. Their courses of study are generally a combination of practical and theoretical subjects. In this branch are 2-year technical schools with departments for building and construction, metal work, and applied art (Wiesbaden). There are also schools which emphasize preparation for such crafts as weaving, ceramics, glass, wood, ivory work, goldsmithing, and watch-making. These last named schools generally have a 3-year course of study concluding with a journeyman's examination.

Technical School (Fachschule)--The word Fachschule was previously used to designate a full-time vocational school of the same type as the technical trade school. For the most part the term Fachschule or Meisterschule, as it is sometimes called, has now come to mean an advanced full-time vocational school. Admission to the technical school is generally granted only to students who have completed a trade school or a technical trade school. In some cases students are also required to have had previous practical training in their profession. In some instances attendance may be combined with practical work in the student's profession or trade.

The purpose of the technical school is to give the student a thorough education in the field of his special interest and thus raise the standard of his theoretical and practical knowledge. Instruction, therefore, is systematic, thorough, and advanced. It is not, however, on university level or of the type that one would receive at a Technische Hochschule. When he graduates, the student is equipped to do highly skilled work, to accept leadership or supervisory positions of responsibility, to train the coming generation as specialized technicians, and if his marks warrant the certification of "good" he is qualified to enter an institution of university rank.

West Germany has a great variety of technical schools. Among the most representative are those in the fields of industry, building installations, mining, metal and wood work, textiles, brewing, commerce, shipbuilding, administration and agriculture. The Building and Engineering School (Bau-und-Ingenieurschule) in Bremen has a curriculum of 5 semesters for students whose previous schooling is the equivalent of completion of the tenth class of a regular secondary school. The Art School (Kunstschule) known in other parts of Germany as a Werkkunstschule, has classes in painting, gold and silversmithing, and graphics. As a rule the curriculum is for 6 semesters, but the class in graphics is a full 8-semester course.

Bremen also has a number of technical schools for women. The Welfare or Social Service School (Wohlfahrtsschule) has a 2-year course of study as does the School for Kindergarten Teachers (Fachschule fuer Kindergaertnerinnen). It also has a Home Economics School for Girls (Hauswirtschaftliche Frauenfachschule) and a school for the Training of Nurses for Children (Schule fuer Kinderpfliegerinnen).

HIGHER EDUCATION

Higher education in the West German Federal Republic includes universities, institutes of technology, schools of theology, art academies, state schools for music, and others listed at the end of this account. Though all of these schools play a significant role in German higher education our chief emphasis will be on the universities.

The German universities were in a deplorable state at the end of World War II. Under the Nazis the freedom to teach (Lehrfreiheit), the freedom to learn (Lernfreiheit), and the freedom to do independent and objective research (Forschungsfreiheit) were seriously curtailed. Coupled with intellectual deterioration was the prodigious physical destruction brought by war. The University of Kiel was completely demolished, Munich was at least half bombed out, and Hamburg lost 600,000 volumes from its library. Only a few universities such as Heidelberg, Erlangen, Goettingen and Tuebingen escaped damage. The rest suffered destruction of from 50 to 80 per cent. The decimation of both student bodies and faculties was calamitous.

Despite formidable handicaps German universities began functioning immediately after the war. The six universities in the British Zone (Goettingen, Bonn, Cologne, Muenster, Hamburg, and Kiel) began operating before the end of 1945. By May 1946, attendance at universities in the American Zone (Heidelberg, Marburg, Erlangen, Frankfurt, Wuerzburg, and Munich) was 20,040 students. By the beginning of 1948 the universities of West Germany had an enrollment of from 50 to 500 per cent greater than before the war.^{5/}

New schools too have been established. In Berlin, the famous Friedrich Wilhelms University located in the Russian sector, was so thoroughly communized after the war that a new university (the Free University of Berlin) was opened in the American sector on November 8, 1948. By 1952 it had grown into an impressive institution staffed by approximately 300 faculty members and attended by 6,000 students. The Hochschule fuer Arbeit, Politik and Wirtschaft (Institute for Labor, Politics, and Economics) at Wilhelmshaven in the British Zone, was founded in 1949, and granted full academic status on March 17, 1953. In the French Zone, the Johannes Gutenberg University of Mainz was re-established by the French on May 22, 1946, nearly a century and a half after having been closed since 1807.

Reform in German higher education has been a slow and uneven process with each of the three Zones in the West attacking the problem in its own way. The recent trend is in the direction of broader curricula, designed to integrate the social sciences and humanities with the sciences and technical subjects which have long dominated German higher education. Where the revised outlook is effective, the new emphasis is upon the training of well-rounded general education rather than on narrow specialization.

^{5/} Robert J. Havinghurst. "Higher Education in Germany," in The Journal of Higher Education, Vol. XIX, No. 1, January 1948, p. 13.

In the British sector of Berlin the "studium generale," embodying the broad aims of the new program is now compulsory at the Technische Hochschule. A similar attempt to overcome the old order is apparent in the program of the Free University of Berlin, where the students have far-reaching rights and responsibilities. Another institution reflecting the desire to train students on broader lines, encourage student self-government, and closer professor-student relations is the new Hochschule fuer Arbeit, Politik and Wirtschaft at Wilhelmshaven.

The majority of German universities have five or six basic faculties which for the most part correspond to the various "colleges" in the universities of the United States. Thus Heidelberg, one of the most famous of the "German" universities in Europe, has the following five faculties: (1) Theologische Fakultät (Faculty of Theology), (2) Juristische Fakultät (Faculty of Law), (3) Medizinische Fakultät (Faculty of Medicine--including Dentistry and Pharmacy), (4) Philosophische Fakultät (Faculty of Philosophy--Liberal Arts), and (5) Naturwissenschaftlich-Mathematische Fakultät (Faculty of Natural Sciences and Mathematics). The Universities of Erlangen, Freiburg and Wuerzburg, have the same faculties as Heidelberg, except that the Faculty of Law in Freiburg and Wuerzburg is called the Rechts-und Staatswissenschaftliche Fakultät (Faculty of Law and Political Science).

Among universities with six faculties are the new University of Mainz in the French Zone and the University of Tuebingen. Their faculties are the same as those of the University of Heidelberg except that they both have two faculties of theology--one in Catholic theology, the other in Evangelical.

A few universities have as many as seven faculties. The University of Bonn has two faculties of Theology (Catholic and Evangelical), and Faculties of Law, Medicine, Philosophy, Mathematics-Natural Science, and Agriculture (Landwirtschaftliche Fakultät). The University of Goettingen also has seven Faculties, almost the same as the University of Bonn, except that it has only one Faculty of Theology but an additional Faculty of Forestry (Forstliche Fakultät).

The main requirement for admission to an institution of higher education in West Germany is the presentation by the student of his Reifezeugnis showing satisfactory passing of the Abitur or Reifepruefung on completion of a secondary school. The Free University of Berlin requires in addition the satisfactory passing of an entrance examination given by the university concerned, while the state of Hesse requires that an admission interview be held with each student.

At the time of his registration the student receives a Study Book (Studienbuch). This is an important document containing much valuable information concerning the student's university status such as the time and basis of his admission to the university, his faculty, the courses in which he was registered during each semester of attendance, and the names of his professors.

Examinations and Degrees

German universities give no semester or year examinations. Studies offered in their individual faculties lead to State, doctoral, and diploma examinations. State examinations are given by the State to meet its needs for personnel in education, law, medicine and pharmacy. The highest academic degree conferred by a university faculty is the degree of doctor. For students who do not wish to take a State or doctoral examination diploma examinations have been arranged in individual subjects. Some examinations comprise two parts, a preliminary examination (Vorprüfung) and a main or final examination taken a number of semesters later.

The following degrees and diplomas offered at the University of Bonn, according to its 1952 Studierführer, are typical. The period of study may vary somewhat. Thus the doctorate in philosophy may be attained at some universities after 6 semesters.

Theology. The degree of Doctor of Theology (Doktor der Theologie - Dr. theol.) may be attained in each of the two faculties of Catholic and Evangelical Theology after at least 8 semesters of university study.

Faculty of Law and Political Science. The degree of Diploma Economist (Diplomvolkswirt) may be attained after 6 semesters of university study. The degree of Doctor of Economics (Doktor der Wirtschaftswissenschaften - Dr. rer. pol.) requires 8 semesters, and that of Doctor of Law (Doktor der Rechte - Dr. jur.) 7 semesters.

Faculty of Medicine. The degree of Doctor of Medicine (Doktor der Medizin - Dr. med.) may be attained after 14 semesters of university attendance and that of Doctor of Dental Medicine (Doktor der Zahnmedizin - Dr. med. dent.) after 8 semesters.

Faculty of Philosophy. The degree of Doctor of Philosophy (Doktor der Philosophie - Dr. phil.) may be attained after 8 semesters of university study. The degree of Diploma Psychologist (Diplompsycholog) also requires 8 semesters.

Faculty of Mathematics-Natural Science. The degree of Doctor of Natural Sciences (Doktor der Naturwissenschaften - Dr. rer. nat.) may be attained after 8 semesters of university study. The degrees of Diploma Chemist (Diplomchemiker), Diploma Physicist (Diplomphysiker), Diploma Physico Chemist (Diplomphysico-Chemiker), Diploma Mathematician (Diplommathematiker), Diploma Geologist (Diplomgeolog), and Diploma Biologist (Diplombiolog) each requires 8 semesters of university attendance.

Faculty of Agriculture. The degrees offered by the Faculty of Agriculture are Diploma Agriculturist (Diplomlandwirt) which requires 6 semesters of university study, and the degrees of Diploma Engineer (Diplomingenieur) and Doctor of Engineering (Dr. Ing.) each of which requires 8 semesters of university attendance.

Some idea of the organization of German Technical Universities or Institutes of Technology and the types of degrees they award may be obtained from the following summary for winter semester 1952-53 for the Technische Universitaet Berlin-Charlottenburg.

1. Faculty of General Engineering (Fakultaet fuer Allgemeine Ingenieurwissenschaften)
 - Diploma Engineer (Diplom-Ingenieur) (Dipl. Ing.)
 - Diploma Mathematician (Diplom-Mathematiker) (Dipl. Math.)
 - Diploma Physicist (Diplom-Physiker) (Dipl. Phys.)
 - Diploma Chemist (Diplom-Chemiker) (Dipl. Chem.)
 - Doctor of Natural Sciences (Doktor der Naturwissenschaften) (Dr. rer. nat.)
 - Doctor of Engineering (Doktor-Ingenieur) (Dr. Ing.)
2. Faculty of Architecture (Fakultaet fuer Architektur)
 - Diploma Engineer (Diplom-Ingenieur) (Dipl. Ing.)
3. Faculty of Civil Engineering (Fakultaet fuer Bauingenieurwesen)
 - Diploma Engineer (Diplom-Ingenieur) (Dipl. Ing.)
4. Faculty of Mechanical Engineering (Fakultaet fuer Maschinenwesen)
 - Diploma Engineer (Diplom-Ingenieur) (Dipl. Ing.)
5. Faculty of Agriculture (Fakultaet fuer Landbau)
 - Diploma Engineer in Sugar Refining (Diplom-Zuckerfabrikingenieur) (Dipl. Zfb.-Ing.)
 - Diploma Agriculturist (Diplom-Landwirt) (Dipl. Ldw.)
 - Diploma Gardener (Diplom-Gaertner) (Dipl. Gtn.)
 - Diploma Brewer (Diplom-Brauereingenieur) (Dipl. Br. Ing.)
 - Diploma Distiller (Diplom-Brennereingenieur) (Dipl. Br. Ing.)
 - Doctor of Agriculture (Doktor der Landwirtschaft) (Dr. agr.)
6. Faculty of Mining and Smelting (Fakultaet fuer Bergbau und Huettenwesen)
 - Diploma Engineer (Diplom-Ingenieur) (Dipl. Ing.)
7. Faculty of Economics (Fakultaet fuer Wirtschaftswissenschaften)
 - Diploma Merchant (Diplom-Kaufmann) (Dipl. Kfm.)
 - Doctor of Economics (Doktor der Wirtschaftswissenschaften) (Dr. rer. pol.)

As already indicated (p.27), this school also has a Faculty of Humanities which does not grant degrees. Its courses provide a humanistic background for students preparing for degrees in the other faculties.

Institutions of higher education. Following is a list of universities and other institutions of higher education in West Germany in 1951-1952 as given on pages 133-136 in The West German Educational System, by Henry P. Pilgert, issued in 1953 by the Historical Division, Office of the Executive Secretary, Office of the High Commissioner for Germany.

Table 13. - Universities and Other Institutions of Higher Learning in West Germany in 1951-1952

Location	Institution	Number of students Summer of 1951
<u>Universities</u>		
Berlin	Freie Universitaet	5,945
Bonn	Rheinische Friedrich-Wilhelms-Universitaet	6,828
Cologne	Universitaet	5,997
Erlangen	Friedrich-Alexander-Universitaet	3,555
Frankfurt	Johann-Wolfgang-Goethe-Universitaet	4,923
Freiburg	Albert-Ludwigs-Universitaet	4,489
Goettingen	Georg-August Universitaet	3,949
Hamburg	Universitaet	4,531
Heidelberg	Ruprecht-Karl-Universitaet	4,255
Kiel	Christian-Albrechts-Universitaet	3,183
Mainz	Johannes-Gutenberg-Universitaet	4,230
Marburg	Philipps-Universitaet	3,554
Munich	Ludwig-Maximilians Universitaet	10,563
Muenster	Westfaelische Landes Universitaet	5,356
Tuebingen	Eberhard-Karls-Universitaet	4,146
Wuerzburg	Julius-Maximilians-Universitaet	2,773

Technical Universities (Institutes of Technology)

Aachen	Rheinisch-Westfaelische Technische Hochschule	3,664
Berlin	Technische Universitaet	3,199
Braunschweig	Technische Hochschule Carolo Wilhelmina	2,402
Darmstadt	Technische Hochschule	2,781
Hanover	Technische Hochschule	2,147
Karlsruhe	Technische Hochschule Fridericiana	3,947
Munich	Technische Hochschule (with Agriculture and Brewery Departments in Weihenstephan)	4,012
Stuttgart	Technische Hochschule	3,754

Other Institutions of Higher Learning

Political Sciences:

Berlin	Deutsche Hochschule fuer Politik	506
Munich	Hochschule fuer politische Wissenschaften	---

Social Sciences:

Mannheim	Wirtschafts-Hochschule	684
Nuremberg	Hochschule fuer Wirtschafts und Sozialwissenschaften	957
Wilhemshaven	Hochschule fuer Arbeit, Politik und Wirtschaft	208

Location	Institution	Number of students Summer of 1951
Theology:		
Bamberg	Philosophisch-Theologische Hochschule	904
Berlin	Kirchliche Hochschule	418
Bethel	Theologische Schule (Kirchliche Hochschule)	200
Dillingen	Philosophisch-Theologische Hochschule	71
Elchstaett	Bishoefliche Philosophisch-Theologische Hochschule	197
Freising	Philosophisch-Theologische Hochschule	137
Hamburg	Kirchliche Hochschule	106
Neuendettelsau	Augustana-Hochschule	80
Paderborn	Philosophisch-Theologische Hochschule	396
Passau	Philosophisch-Theologische Hochschule	148
Regensburg	Philosophisch-Theologische Hochschule	850
Trier	Theologische Fakultaet	
Wupper tal	Kirchliche Hochschule	146
Fine Arts:		
Berlin	Hochschule fuer bildende Kuenste	646
Dusseldorf	Staatliche Kunstakademie	
Frankfurt	Staedelschule, Staatliche Hochschule fuer bildende Kuenste	
Freiburg	Staatliche Akademie der bildenden Kuenste	
Kassel	Staatliche Werkakademie	
Munich	Hochschule der bildenden Kuenste	425
Nuremberg	Akademie der bildenden Kuenste	
Stuttgart	Staatliche Akademie der bildenden Kuenste	
Music:		
Berlin	Hochschule fuer Musik	640
Cologne	Staatliche Hochschule fuer Musik	403
Detmold	Nordwestdeutsche Musikakademie	
Frankfurt	Staatliche Hochschule fuer Musik	
Freiburg	Staatliche Hochschule fuer Musik	230
Hamburg	Staatliche Hochschule fuer Musik	
Karlsruhe	Badische Hochschule und Konservatorium fuer Musik	
Luebeck	Schleswig-Holsteinische Musikakademie	
Munich	Staatliche Hochschule fuer Musik	
Stuttgart	Staatliche Hochschule fuer Musik	
Sports:		
Cologne	Sporthochschule	259

Location	Institution	Number of students Summer of 1951
Miscellaneous Fields:		
Pedagogy:	Berlin, Paedagogische Hochschule	883
	Frankfurt am Main, Hochschule fuer Inter- nationale Padagogische Forschung	---
Mining:	Clausthal, Bergakademie	672
Medical Science:	Dusseldorf, Medizinische Akademie	416
Natural and Medical Sciences, Agriculture:	Giessen, Justus Liebig-Hochschule	1,001
Veterinary:	Hanover, Tieraerztliche Hochschule	489
Horticulture:	Hanover, Hochschule fuer Gartenbau und Landeskultur	233
Administration and Diplomacy:	Speyer, Hochschule fuer Verwaltungswis- senschaften	
Agriculture:	Stuttgart, Landwirtschaftliche Hochschule	466

APPENDIX

Graphs

To give further perspective to the problem of German education a series of graphs has been prepared which provides a rapid and comprehensive survey of the schooling required for a German student who wishes to attain the degree of Doctor of Philosophy (Graph 2), or who wishes to become a physician (Graph 4), or a dentist (Graph 6). Each graph traces the various steps in a German student's education from the time he enters elementary school until he completes his university training. Graphs No. 3, 5, and 7 show the schooling required for American students who wish to achieve the same goals in the United States. Each graph represents the minimum requirements for the degree concerned.

Graph 2.--MINIMUM REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY
FOR A GERMAN STUDENT

Age	School Year	Grade or Semester	Educational Level	Examination, Diploma, Degree
22	17	Eighth Semester Seventh Semester		Many universities require 8 semesters
21	16	Sixth Semester Fifth Semester		Doctor of Philosophy (Doktor der Philosophie - Dr. phil.) Examination and thesis
20	15	Fourth Semester Third Semester		
19	14	Second Semester First Semester	University	
18	13	Oberprima--OI		Certificate of Maturity (Reifezeugnis) Necessary for university admission
17	12	Unterprima--UI		
16	11	Obersekunda--OII		
15	10	Untersekunda--UII		Gymnasium
14	9	Obertertia--OIII		Realgymnasium
13	8	Untertertia--UIII		Oberrealschule
12	7	Quarta--IV		
11	6	Quinta--V		
10	5	Sexta--VI	Secondary	
9	4	Class 4		Transfer to the secondary school
8	3	Class 3		
7	2	Class 2		Grundschule (Foundation school)
6	1	Class 1	Elementary	

Graph 3.--MINIMUM REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY
FOR AN AMERICAN STUDENT

Age	School Year	Grade of Semester	Educational Level	Examination, Diploma, Degree
24	19	Sixth Semester Fifth Semester		Doctor of Philosophy (Ph.D.) Thesis and examination
23	18	Fourth Semester Third Semester		Prelim. Exam. to determine qualification for Doctorate
22	17	Second Semester First Semester	Graduate School	Master's degree (M.A. or M.S.) Exam. Thesis at some schools
21	16	Eighth Semester Seventh Semester	Senior	Bachelor of Arts (B.A.) or Bachelor of Science (B.S.)
20	15	Sixth Semester Fifth Semester	Junior	
19	14	Fourth Semester Third Semester	Sophomore	
18	13	Second Semester First Semester	University	
17	12	Twelfth Grade	Senior High School	High School Diploma. Neces- sary for admission to university
16	11	Eleventh Grade		
15	10	Tenth Grade		
14	9	Ninth Grade	Junior High School	
13	8	Eighth Grade		
12	7	Seventh Grade	Secondary	
11	6	Sixth Grade		Transfer to the secondary school. Some elementary schools continue through grade 8
10	5	Fifth Grade		
9	4	Fourth Grade		
8	3	Third Grade		
7	2	Second Grade		
6	1	First Grade	Elementary	

Graph 4--MINIMUM REQUIREMENTS FOR A GERMAN STUDENT STUDYING MEDICINE

Age	School Year	Grade or Semester	Educational Level	Examination, Diploma, Degree
		Univ. attendance not required		Doctor of Medicine - Dr. med. Thesis and examination. No time limitation.
25	20	1-year Internship	Clinic or Hospital	License to practice as Physician (Approbation als Arzt)
24	19	Eleventh Semester) Clinical Study	State Examination in Medicine (Arztliche Prüfung)
23	18	Tenth Semester		
		Ninth Semester		
22	17	Eighth Semester		
		Seventh Semester		
21	16	Sixth Semester) Pre-clinical Study	Preliminary Examination in Medicine (Arztliche Vorprüfung)
		Fifth Semester		
20	15	Fourth Semester		
		Third Semester) University	
19	14	Second Semester		
		First Semester		
18	13	Oberprima--OI		Certificate of Maturity (Reifezeugnis) Necessary for university admission
17	12	Unterprima--UI		
16	11	Obersekunda--OII		
15	10	Untersekunda--UII		Gymnasium
14	9	Obertertia--OIII		Realgymnasium
13	8	Untertertia--UIII		Oberrealschule
12	7	Quarta--IV		
11	6	Quinta--V		
10	5	Sexta--VII	Secondary	
9	4	Class 4		Transfer to secondary school
8	3	Class 3		
7	2	Class 2		Grundschule (Foundation school)
6	1	Class 1	Elementary	

Graph 5.--MINIMUM REQUIREMENTS FOR AN AMERICAN STUDENT STUDYING MEDICINE

Age	School Year	Grade or Semester	Educational Level	Examination, Diploma, Degree
26	21	Second Year		Begin Practice of Medicine after 1 or 2 years of Internship and success in State Board Exam.
25	20	First Year	Hospital Internship	
24	19	Eighth Semester Seventh Semester		Doctor of Medicine (M. D.)
23	18	Sixth Semester Fifth Semester		
22	17	Fourth Semester Third Semester		
21	16	Second Semester First Semester	Medical School	
20	15	Sixth Semester Fifth Semester		Admitted on transcript to Medical School. Ten schools now (1954) require 4 years of pre-medical study for admission
19	14	Fourth Semester Third Semester	Pre-medical Course	
18	13	Second Semester First Semester	University	
17	12	Twelfth Grade		High School Diploma. Necessary for admission to university
16	11	Eleventh Grade	Senior High School	
15	10	Tenth Grade		
14	9	Ninth Grade		
13	8	Eighth Grade	Junior High School	
12	7	Seventh Grade	Secondary	
11	6	Sixth Grade		Transfer to the secondary school Some elementary schools continue through grade 8
10	5	Fifth Grade		
9	4	Fourth Grade		
8	3	Third Grade		
7	2	Second Grade		
6	1	First Grade	Elementary	

Graph 6.--MINIMUM REQUIREMENTS FOR A GERMAN STUDENT STUDYING DENTISTRY

Age	School Year	Grade or Semester	Educational Level	Examination, Diploma, Degree
		Eighth Semester		Doctor of Dental Medicine (Doktor der Zahnheilkunde - Dr. med. dent.)
22	17	Seventh Semester		State Exam. ^{1/} Qualifies for license to practice as Dentist (Zahnarzt)
21	16	Sixth Semester Fifth Semester	Clinical Study	
20	15	Fourth Semester Third Semester		Preliminary Examination in Dentistry (Zahnärztliche Vorprüfung)
19	14	Second Semester First Semester	Pre-clinical Study University	
18	13	Oberprima--OI		Certificate of Maturity (Reifezeugnis) Necessary for university admission
17	12	Unterprima--UI		
16	11	Obersekunda--OII		
15	10	Untersekunda--UII		Gymnasium
14	9	Obertertia--OIII		Realgymnasium
13	8	Untertia--UIII		Oberrealschule
12	7	Quarta--IV		
11	6	Quinta--V		
10	5	Sexta--VI	Secondary	
9	4	Class 4		Transfer to the secondary school
8	3	Class 3		
7	2	Class 2		Grundschule (Foundation school)
6	1	Class 1	Elementary	

^{1/} State Examination in Dentistry (Zahnärztliche Prüfung).

Graph 7.--MINIMUM REQUIREMENTS FOR AN AMERICAN STUDENT STUDYING DENTISTRY

Age	School Year	Grade or Semester	Educational Level	Examination, Diploma, Degree
23	18	Eighth Semester Seventh Semester		State Board Examination Doctor of Dental Surgery (D.D.S.) Or Doctor of Dental Medicine (D.M.D.)
22	17	Sixth Semester Fifth Semester		
21	16	Fourth Semester Third Semester		
20	15	Second Semester First Semester	Dental School	
19	14	Fourth Semester Third Semester	Pre-Dental Course	Dental Aptitude Examination required by most Dental Schools
18	13	Second Semester First Semester	University	
17	12	Twelfth Grade	Senior High School	High School Diploma. Necessary for admission to university
16	11	Eleventh Grade		
15	10	Tenth Grade		
14	9	Ninth Grade	Junior High School	
13	8	Eighth Grade		
12	7	Seventh Grade	Secondary	
11	6	Sixth Grade		Transfer to the secondary school Some elementary schools continue through grade 8
10	5	Fifth Grade		
9	4	Fourth Grade		
8	3	Third Grade		
7	2	Second Grade		
6	1	First Grade	Elementary	

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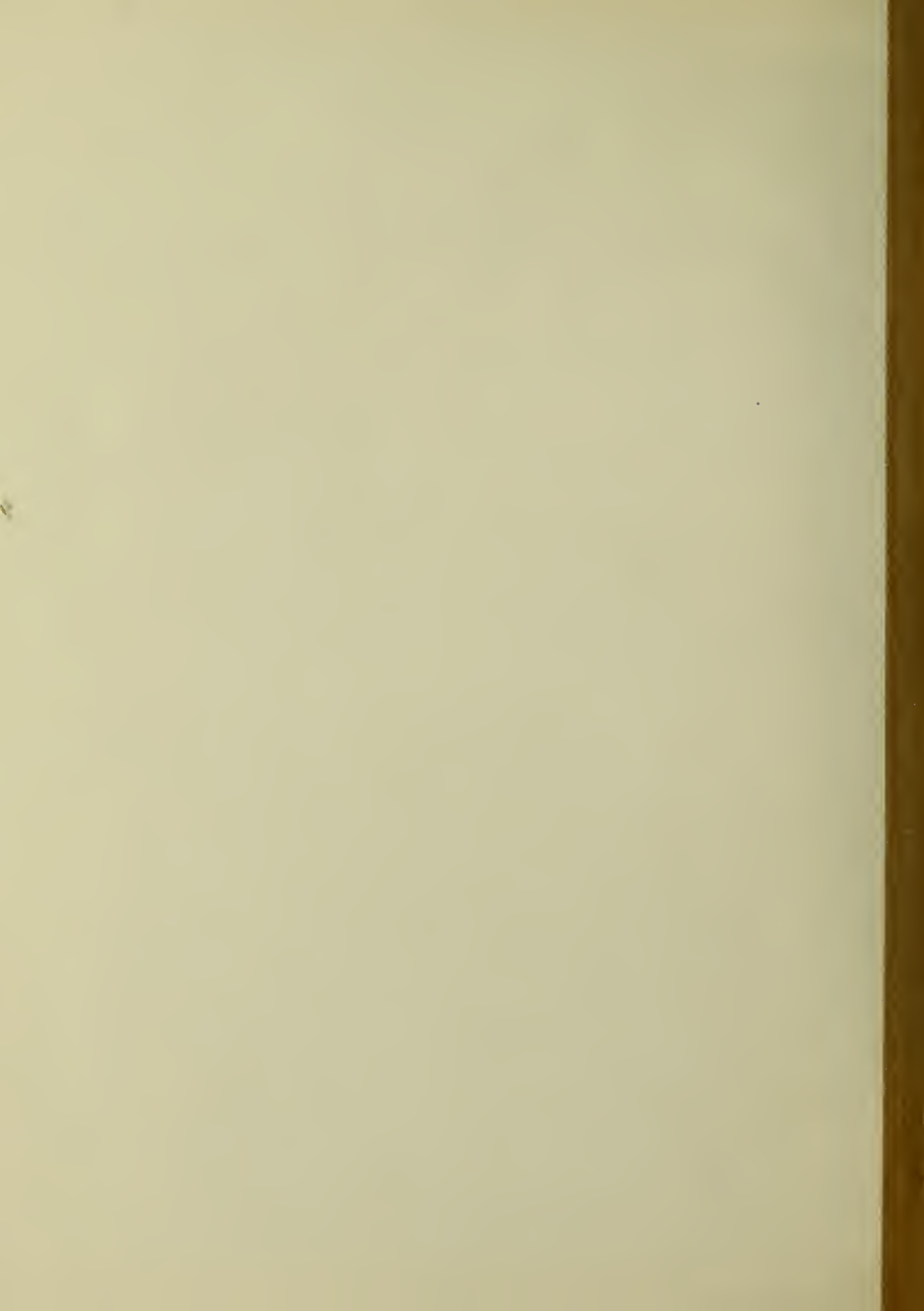
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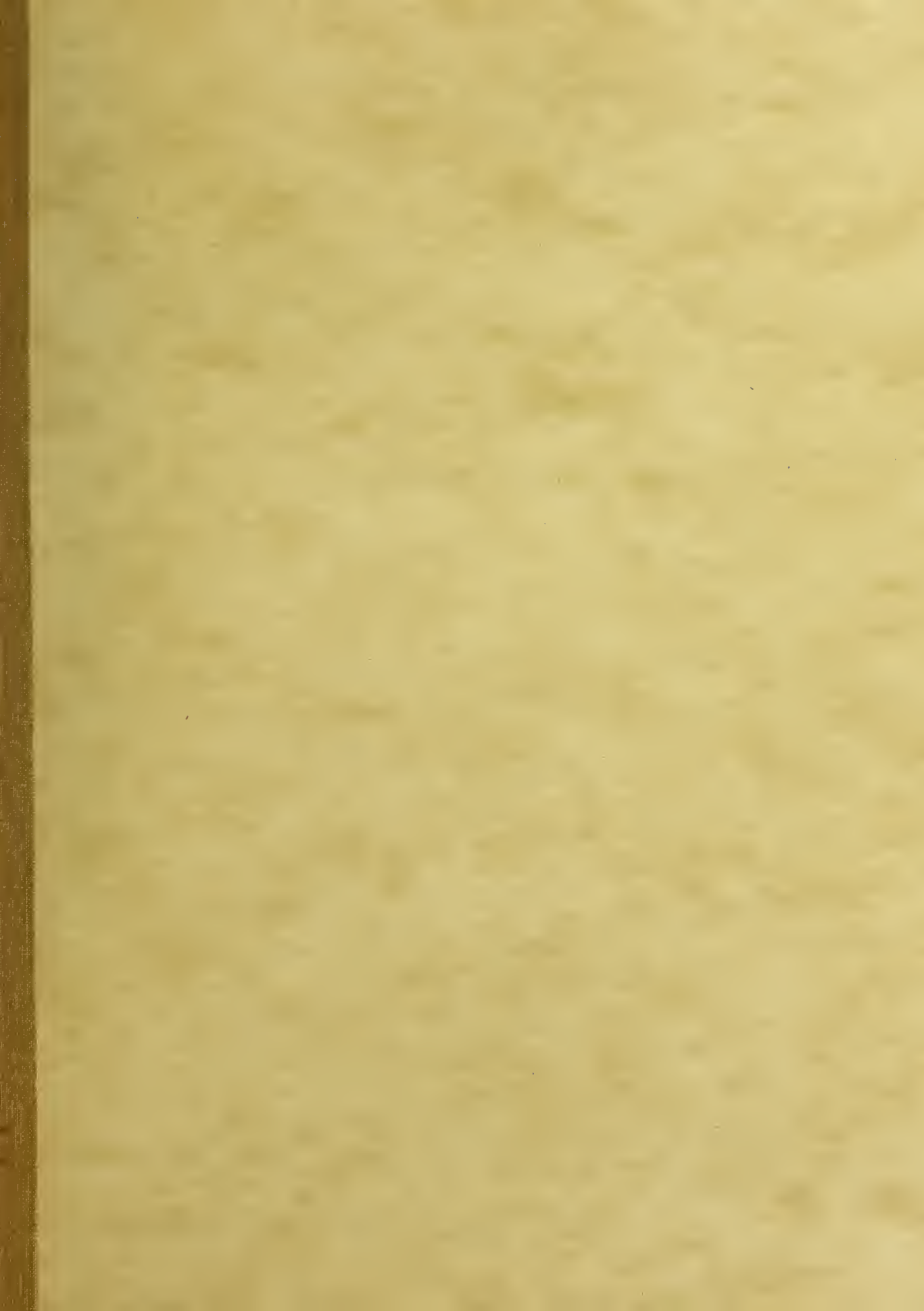
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